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# (54) Gas burner

(57) A gas burner comprises a body 1 formed by two sheet metal shells 2, 3, joined together by flanges along their margins and shaped to constitute a body of Venturi tube form with an expansion chamber 5 and a chimney tube 6. A bracket 8 is secured to the base 10 of a cooking apparatus and is provided with a flange 9 to locate the burner body. A burner head 7 extends through a central aperture 12 of the bracket 8, the latter being provided with resilient tongues to engage in oblique slots 18 of the head 7 so that the latter is releasably fastened by means of the bayonet joint type. Screws 15 engage in nuts 14 secured to the bracket 8 in order to hold a dished ring 16 which engages the upper wall 11 of the cooking apparatus housing. An igniter 13 is secured in a hole in the bracket 8.

Fig.1

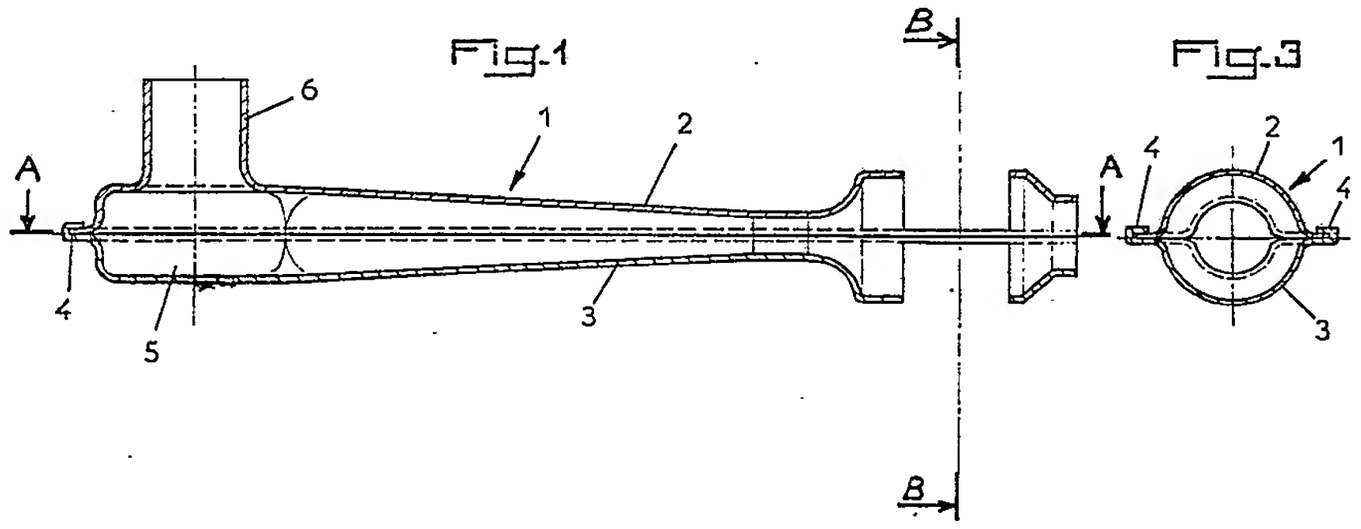


Fig.4

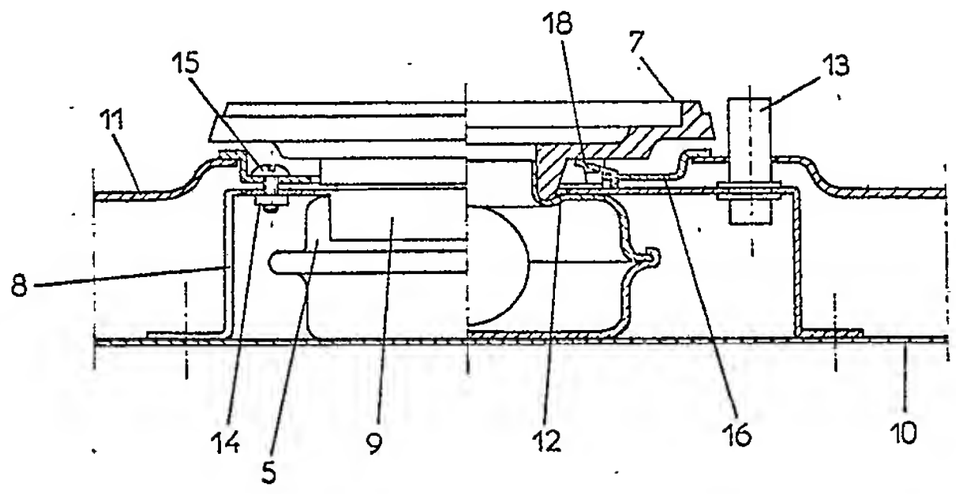


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Fig.1

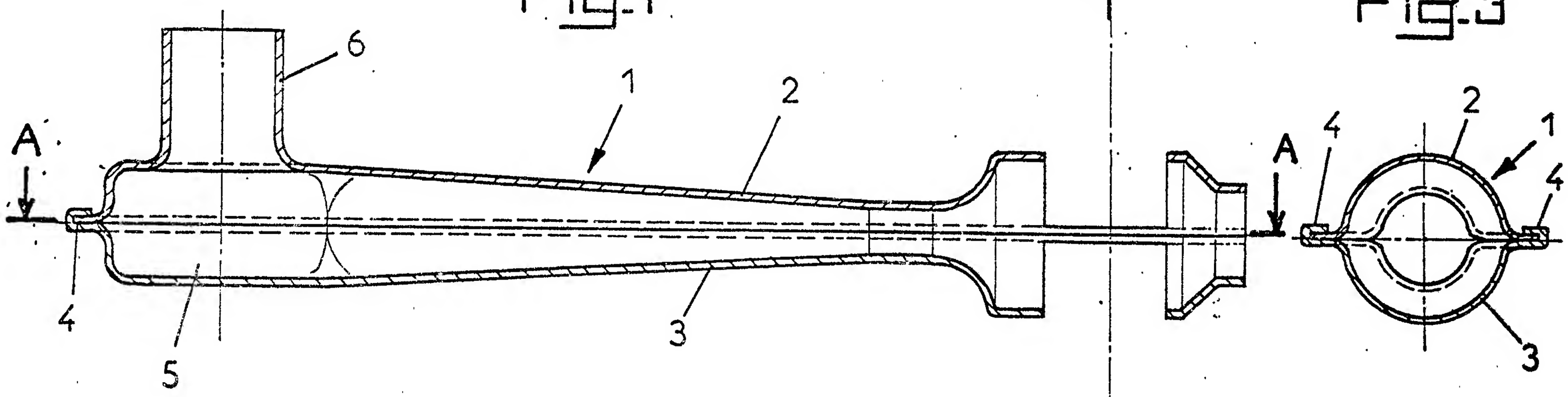
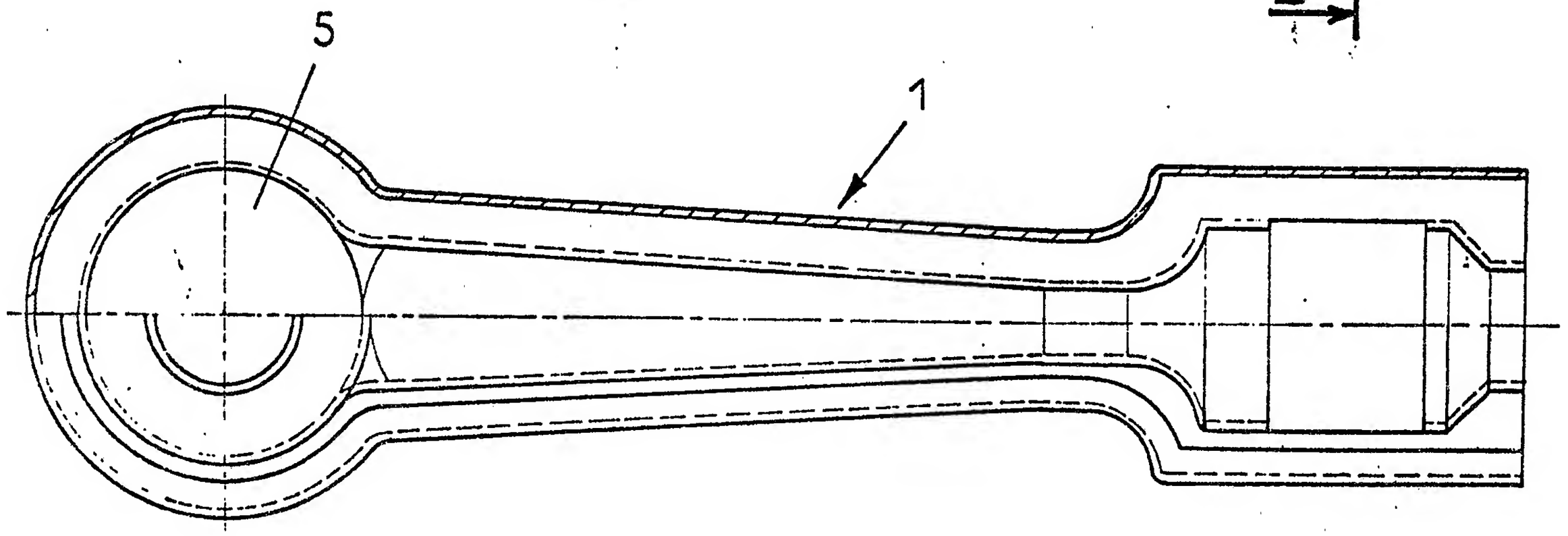



Fig.3




Fig.2



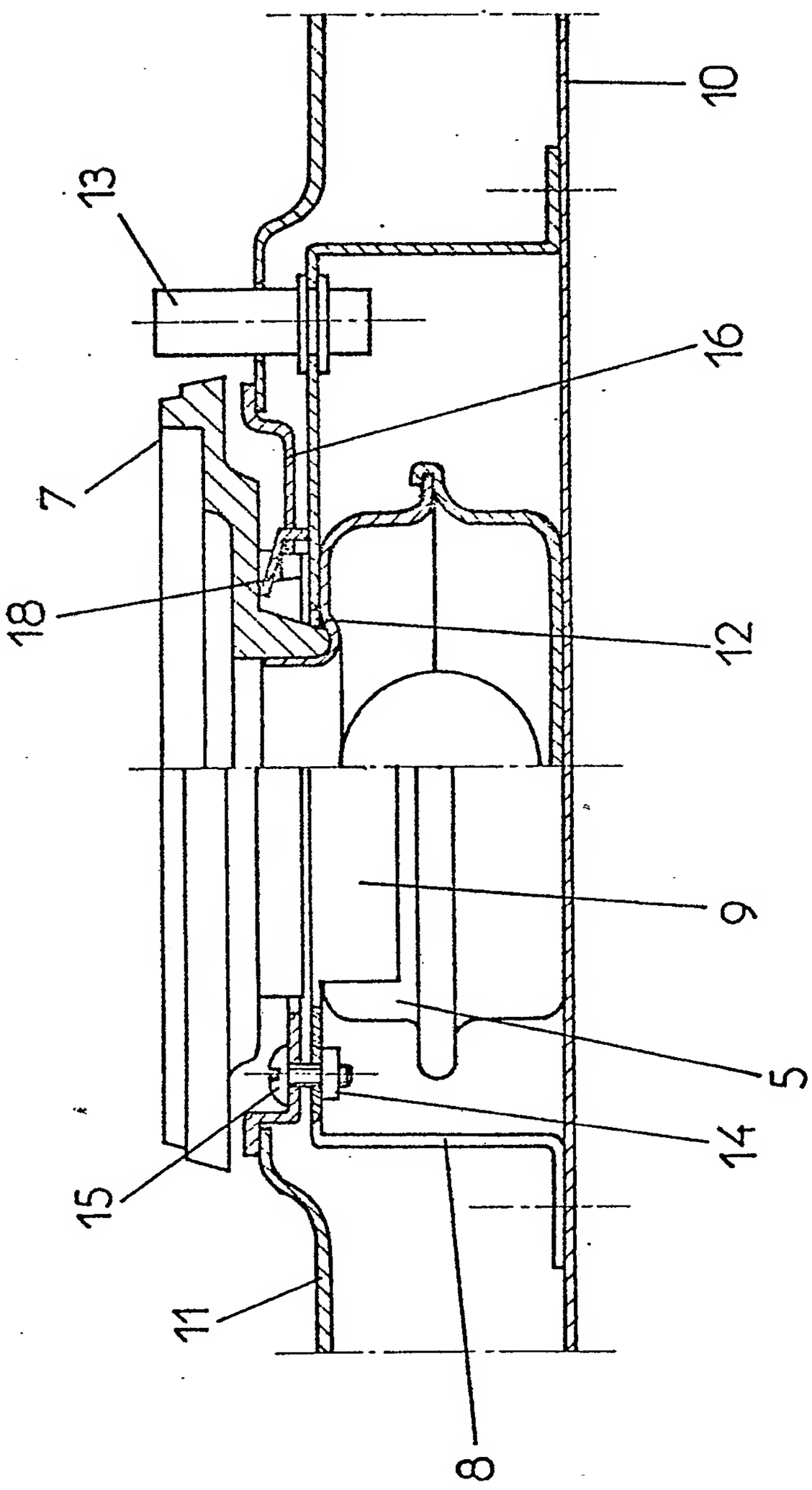



Fig-4

Fig. 5

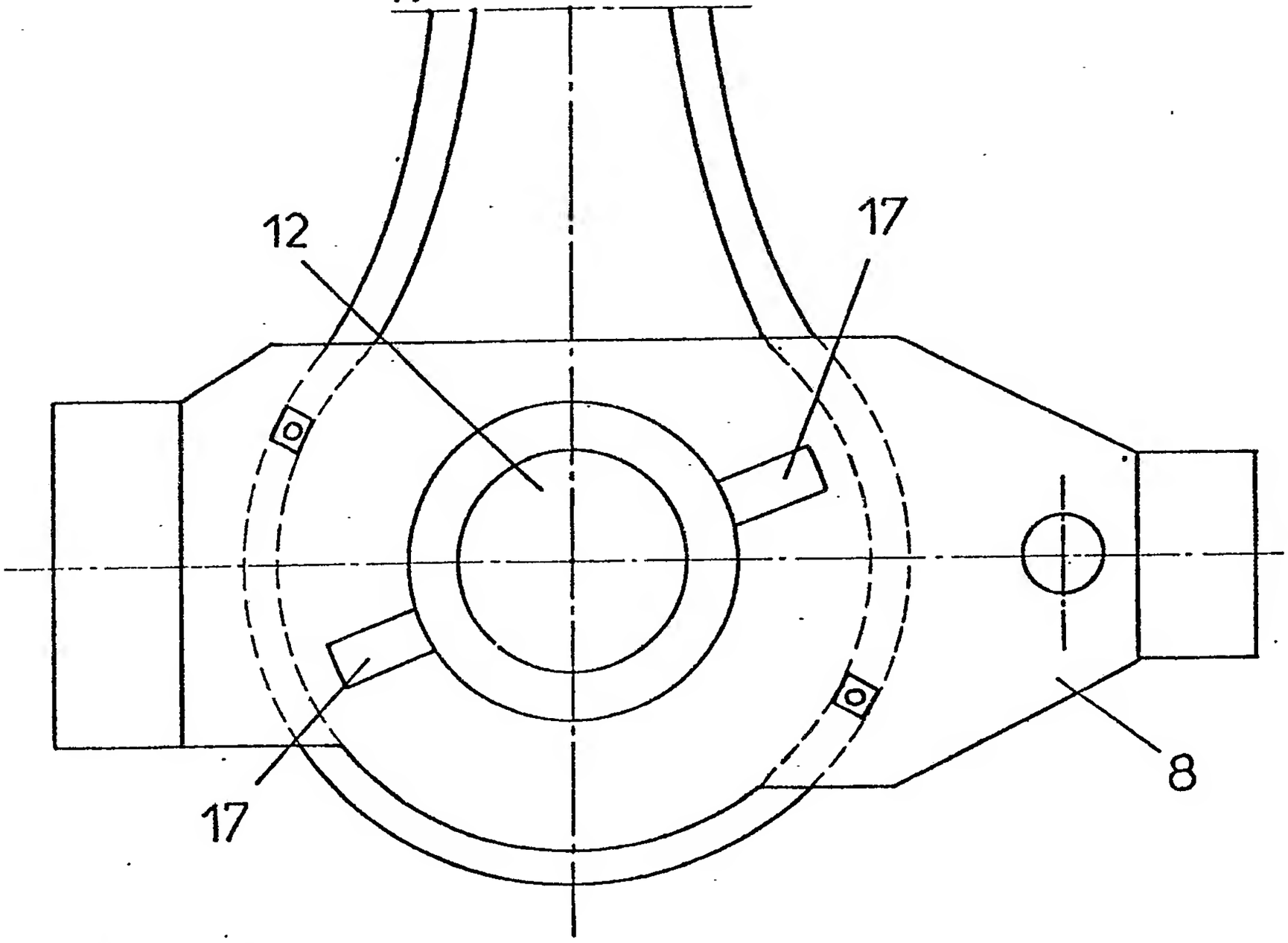
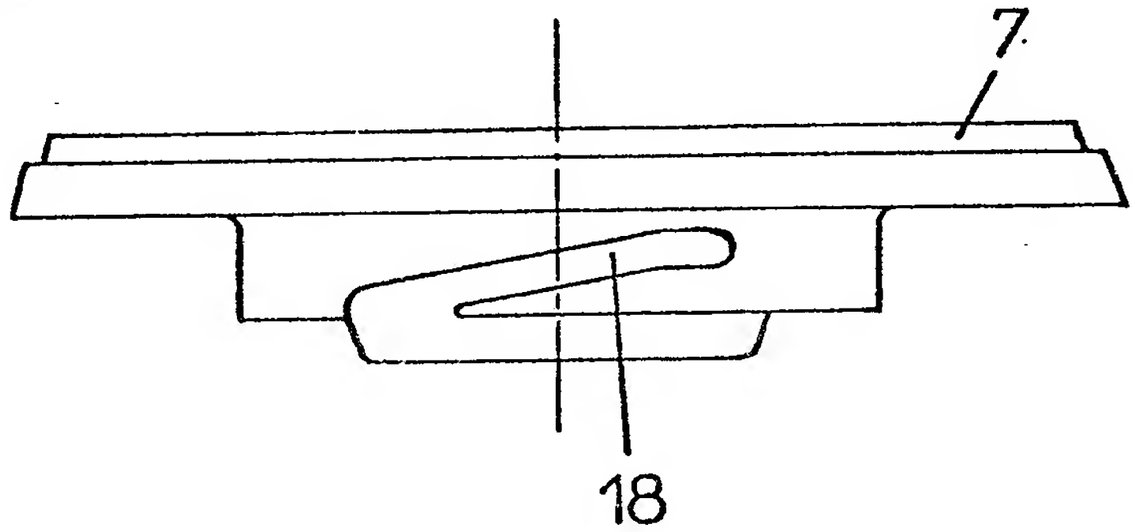



Fig. 6



SPECIFICATION

**A gas burner**

This invention relates to a gas burner.

There are many forms of gas burners already in use in cooking apparatus of various kinds, each gas burner comprising a tubular body in the form of a Venturi tube at the wider end of which there is arranged a burner head, with or without the interposition of a mixing chamber. At the smaller end of the Venturi tube a jet of gas is introduced through a nozzle and there are means for the admission of combustion air to be mixed with the gas; very often there are means for adjusting the proportions of the gas and air. Various disadvantages are found with the known gas burners, for example they may be of cast construction which is heavy and costly, or they may require a considerable amount of space so that the cooking apparatus must be cumbersome to accommodate the burners.

The present invention is therefore intended to provide a gas burner which obviates or mitigates some of the disadvantages of some known gas burners.

According to the present invention a gas burner comprises two sheet metal shells joined together along their margins and shaped to constitute a body of Venturi tube form with an expansion chamber and a chimney tube.

A burner head is fastened to the burner body, preferably so that it can be easily released, and in one advantageous construction the burner head is fastened to the body by fastening means of the bayonet joint type.

When the burner is installed in a cooking apparatus the body of the burner may rest directly upon a base of a housing of the apparatus, and there may be a bracket secured to the said base, the bracket serving both to hold the burner body in position and to carry tongues which engage in oblique slots in the burner head to constitute the fastening means by which the burner head is releasably fastened to the burner body. This bracket may have a hole in which an igniter is secured, and nuts secured to the bracket may be engaged by screws holding a dished ring which engages an upper part of the housing of the cooking apparatus.

In various modified constructions the burner head may rest upon the body of the burner without being fastened, or in order to prevent any risk of displacement of the burner head it may be secured rigidly to the burner body.

How the invention may be put into practice appears from the following description with reference to the accompanying drawings, in which by way of example there is illustrated a gas burner embodying the invention,

Figure 1 being an elevation of the body of the burner in longitudinal section,

Figure 2 is a plan view corresponding to Figure 1 and half in longitudinal section, on the line A—A,

Figure 3 is a view in section on the line B—B of Figure 1,

Figure 4 an end view, partially in section, illustrating the burner secured in a housing of a cooking apparatus,

Figure 5 a plan view showing some of the parts which are illustrated in Figure 4, and

Figure 6 a side view of the burner head.

The illustrated gas burner includes a body 1 comprising two sheet metal shells 2 and 3 joined together along their margins and shaped so that the body 1 is of venturi tube form with a drum-shaped expansion chamber 5 and a short vertical chimney tube 6. When the burner is in use injected gas with entrained combustion air travels along the body 1, the air and gas becoming mixed in the Venturi tube and further mixed in the expansion chamber 5 before passing up the tube 6 to the burner head 7. As Figure 3 shows, the upper shell 2 has flanges which are secured in folded-over flanges of the lower shell 3 along the margins 4.

As illustrated in Figures 4, 5 and 6 the burner head 7 is secured releasably to the body of the burner by fastening means of the bayonet joint type. For this purpose a bracket 8 is secured to a base 10 of a housing of a cooking apparatus, the bracket 8 being provided with a flange 9 for locating the burner body. The bracket 8 also has a central aperture 12 for locating the burner head 7 and accommodating the chimney tube 6. In the bracket 8 there is a hole in which an igniter 13 is secured. Fastened to the bracket 8 there are two nuts 14 in which engage screws 15 holding a dished ring 16 which in turn engages an upper wall 11 of the housing of the cooking apparatus.

As Figure 6 shows, the burner head 7 is provided with oblique slots 18. Figures 4 and 5 illustrate how the bracket 8 carries two diametrically opposite resilient tongues 17 which engage in the slots 18, so that the burner head 7 is releasably fastened to the body 1 of the burner by fastening means of the bayonet joint type. This allows the burner head 7 to be easily removed and replaced, for example during a cleaning operation.

Various modifications may be introduced without departing from the invention as defined in the appended claims, for example the margins or flanges of the shells 2 and 3 may be secured together by brazing or welding instead of folding the flanges over one another.

CLAIMS

1. A gas burner comprising two sheet metal shells (2,3) joined together along their margins (4) and shaped to constitute a body (1) of Venturi tube form with an expansion chamber (5) and a chimney tube (6).

2. A gas burner according to Claim 1, comprising a burner head (7) releasably fastened to the body (1).

3. A gas burner according to Claim 2, wherein the burner head (7) is fastned to the body (1) by fastening means (17, 18) of the bayonet-joint type.

4. A gas burner according to Claim 3, wherein a bracket (8) is secured to the base (10) of a housing of a cooking apparatus, the bracket (8) serving both to hold the burner body (1) in position and to carry tongues (17) which engage in oblique slots (18) in the burner head (7) to constitute the said fastening means.

5. A gas burner according to Claim 4, wherein the bracket (8) has a hole in which an igniter (13) is secured.

6. A gas burner according to Claim 4 or 5, wherein nuts (14) secured to the bracket (8) are engaged by screws (15) holding a dished ring (16) which engages an upper part (11) of the said housing.

7. A gas burner constructed and arranged substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

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# TITLE: Gas burner

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**ASSIGNEE-INFORMATION:**

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## ABSTRACT:

A gas burner comprises a body 1 formed by two sheet metal shells 2, 3, joined together by flanges along their margins and shaped to constitute a body of Venturi tube form with an expansion chamber 5 and a chimney tube 6. A bracket 8 is secured to the base 10 of a cooking apparatus and is provided with a flange 9 to locate the burner body. A burner head 7 extends through a central aperture 12 of the bracket 8, the latter being provided with resilient tongues to engage in oblique slots 18 of the head 7 so that the latter is releasably fastened by means of the bayonet joint type. Screws 15 engage in nuts 14 secured to the bracket 8 in order to hold a dished ring 16 which

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